

provided, and the number of times compensation was paid. It shall also include the name, address, telephone number, and contact person name for the operator.

(c) Beginning October 30, 2000 for large operators, and October 29, 2001 for small operators, and on that date in each year thereafter, each fixed-route operator shall submit to the Department a report on how many passengers with disabilities used the lift to board accessible buses. For fixed-route operators, the report shall reflect separately the data pertaining to 48-hour advance reservation service and other service.

(d) Each operator shall submit to the Department, October 28, 1999 and each year thereafter on that date, a summary report listing the number of new buses and used buses it has purchased or leased during the preceding year, and how many of the buses in each category are accessible. It shall also include the total number of buses in the operator's fleet and the name, address, telephone number, and contact person name for the operator.

(e) The information required to be submitted to the Department shall be sent to the following address: Bureau of Transportation Statistics, 400 7th Street, SW., Washington, DC 20590.

**§ 37.215 Review of requirements.**

(a) Beginning October 28, 2005, the Department will review the requirements of § 37.189 and their implementation. The Department will complete this review by October 30, 2006.

(1) As part of this review, the Department will consider factors including, but not necessarily limited to, the following:

(i) The percentage of accessible buses in the demand-responsive fleets of large and small demand-responsive operators.

(ii) The success of small and large demand-responsive operators' service at meeting the requests of passengers with disabilities for accessible buses in a timely manner.

(iii) The ridership of small and large operators' demand-responsive service by passengers with disabilities.

(iv) The volume of complaints by passengers with disabilities.

(v) Cost and service impacts of implementation of the requirements of § 37.189.

(2) The Department will make one of the following decisions on the basis of the review:

(i) Retain § 37.189 without change; or  
 (ii) Modify the requirements of § 37.189 for large and/or small demand-responsive operators.

(b) Beginning October 30, 2006, the Department will review the requirements of §§ 37.183, 37.185, 37.187, 37.191 and 37.193(a) and their implementation. The Department will complete this review by October 29, 2007.

(1) As part of this review, the Department will consider factors including, but not necessarily limited to, the following:

(i) The percentage of accessible buses in the fixed-route fleets of large and small fixed-route operators.

(ii) The success of small and large fixed-route operators' interim or equivalent service at meeting the requests of passengers with disabilities for accessible buses in a timely manner.

(iii) The ridership of small and large operators' fixed-route service by passengers with disabilities.

(iv) The volume of complaints by passengers with disabilities.

(v) Cost and service impacts of implementation of the requirements of these sections.

(2) The Department will make one of the following decisions on the basis of the review:

(i) Retain §§ 37.183, 37.185, 37.187, 37.191, 37.193(a) without change; or

(ii) Modify the requirements of §§ 37.183, 37.185, 37.187, 37.191, 37.193(a) for large and/or small fixed-route operators.

**Appendix A to Subpart H of Part 37—Forms for Advance Notice Requests and Provision of Equivalent Service**

*Form A—For Use by Providers of Advance Notice Service*

1. Operator's name \_\_\_\_\_
2. Address \_\_\_\_\_
3. Phone number: \_\_\_\_\_
4. Passenger's name: \_\_\_\_\_
5. Address: \_\_\_\_\_

6. Phone number: \_\_\_\_\_
7. Scheduled date and time of trip: \_\_\_\_\_
8. Date and time of request: \_\_\_\_\_
9. Was accessible bus provided for trip?  
 Yes \_\_\_ no \_\_\_

10. Was there a basis recognized by U.S. Department of transportation regulations for not providing an accessible bus for the trip? Yes \_\_\_ no \_\_\_  
 If yes, explain \_\_\_\_\_

11. If the answers to items 9 and 10 were both no, attach documentation that compensation required by department of transportation regulations was paid.

*Form B—For Use by Providers of Equivalent Service*

1. Operator's name \_\_\_\_\_
2. Address \_\_\_\_\_
3. Phone number: \_\_\_\_\_
4. Passenger's name: \_\_\_\_\_

5. Address: \_\_\_\_\_

6. Phone number: \_\_\_\_\_

7. Date and time of trip: \_\_\_\_\_

8. Location of need for equivalent service: \_\_\_\_\_

9. Was equivalent service provided for trip?  
 Yes \_\_\_ no \_\_\_

10. If the answer to items 9 and 10 is no, attach documentation that compensation required by Department of Transportation regulations was paid.

[FR Doc. 98-25421 Filed 9-24-98; 2:15 pm]

BILLING CODE 4910-62-P

**ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD**

**36 CFR Part 1192**

**DEPARTMENT OF TRANSPORTATION**

**Office of the Secretary**

**49 CFR Part 38**

**RIN 2105-AC00**

**Americans with Disabilities Act Accessibility Guidelines for Transportation Vehicles; Over-the-Road Buses**

**AGENCIES:** Architectural and Transportation Barriers Compliance Board and Department of Transportation.

**ACTION:** Joint final rule.

**SUMMARY:** The Architectural and Transportation Barriers Compliance Board and the Department of Transportation amend the accessibility guidelines and standards under the Americans with Disabilities Act for over-the-road buses (OTRBs) to include scoping and technical provisions for lifts, ramps, wheelchair securement devices, and moveable aisle armrests. Revisions to the specifications for doors and lighting are also adopted. The specifications describe the design features that an OTRB must have to be readily accessible to and usable by persons who use wheelchairs or other mobility aids. The Department of Transportation has published a separate rule elsewhere in today's **Federal Register** which addresses when OTRB operators are required to comply with the specifications.

**EFFECTIVE DATE:** October 28, 1998.

**FOR FURTHER INFORMATION CONTACT:** Access Board: Dennis Cannon, Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. Telephone number (202)

272-5434 extension 35 (voice); (202) 272-5449 (TTY). Electronic mail address: cannon@access-board.gov.

*Department of Transportation:* Robert C. Ashby, Deputy Assistant General Counsel for Regulation and Enforcement, Department of Transportation, 400 7th Street SW., room 10424, Washington, DC 20590. Telephone (202) 366-9306 (voice) or (202) 755-7687 (TTY).

The telephone numbers listed above are not toll-free numbers.

#### SUPPLEMENTARY INFORMATION:

#### Availability of Copies and Electronic Access

Single copies of this publication may be obtained at no cost by calling the Access Board's automated publications order line (202) 272-5434, by pressing 1 on the telephone keypad, then 1 again, and requesting publication S-22 (Over-the-Road Buses Final Rule). Persons using a TTY should call (202) 272-5449. Please record a name, address, telephone number and request publication S-22. This document is available in alternate formats upon request. Persons who want a copy in an alternate format should specify the type of format (cassette tape, Braille, large print, or computer disk). This document is also available on the Board's Internet site (<http://www.access-board.gov/rules/otrbfinl.htm>).

#### Background

Under the Americans with Disabilities Act of 1990 (ADA), the Architectural and Transportation Barriers Compliance Board (Access Board) is responsible for developing guidelines to ensure that the various kinds of transportation vehicles covered by the law are readily accessible to and usable by individuals with disabilities.<sup>1</sup> 42 U.S.C. 12204.

The Department of Transportation (DOT), which is responsible for issuing regulations to implement the transportation provisions of the ADA, is required to include in its regulations accessibility standards for vehicles that are consistent with the Access Board's guidelines. 42 U.S.C. 12186.

<sup>1</sup> The Access Board is an independent Federal agency established by section 502 of the Rehabilitation Act of 1973, as amended, whose primary mission is to promote accessibility for individuals with disabilities. The Access Board consists of 25 members. Thirteen are appointed by the President from among the public, a majority of whom are required to be individuals with disabilities. The other twelve are heads of the following Federal agencies or their designees whose positions are Executive Level IV or above: The Departments of Health and Human Services, Education, Transportation, Housing and Urban Development, Labor, Interior, Defense, Justice, Veterans Affairs, and Commerce; General Services Administration; and United States Postal Service.

For purposes of the ADA, an over-the-road bus (OTRB) is "a bus characterized by an elevated passenger deck located over a baggage compartment." 42 U.S.C. 12181(5). The ADA provides for rulemaking to establish accessibility requirements for OTRBs operated by private entities to be conducted in two stages: interim requirements and final requirements. 42 U.S.C. 12186.<sup>2</sup>

The interim requirements were established in 1991 and do not require any structural changes to OTRBs. The Access Board issued accessibility guidelines for OTRBs that provided technical specifications for non-structural design features such as floor surfaces, lighting, and handrails and stanchions. 36 CFR 1192.151 to 1192.157. The DOT adopted these guidelines as its standards and also established interim requirements for providing boarding assistance and accommodating wheelchairs and other mobility aids. 49 CFR 37.169 and 49 CFR 38.151 to 38.157.

Prior to establishing the final requirements, the Office of Technology Assessment was to study issues related to OTRB accessibility. 42 U.S.C. 12185. The Office of Technology Assessment published its study on May 16, 1993. Requirements for accessibility were to have taken effect by July 26, 1996, for large transportation providers, and one year later for small entities. 42 U.S.C. 12186. The National Highway System Designation Act of 1995 (Pub. L. 104-59), amended section 306(a)(2)(B)(iii) of the ADA by removing the specific compliance dates and instead requiring large transportation providers to comply two years after the issuance of the DOT regulation, and small providers to comply three years after issuance.

As a preliminary step to issuing final requirements, the Access Board and the DOT held a workshop in Washington, DC on October 21 and 22, 1993, to discuss issues related to OTRB accessibility. About 30 representatives of the OTRB industry and disability organizations attended the workshop. At the workshop, it was announced that the Access Board and the DOT were considering amending the accessibility guidelines and standards for OTRBs to include technical specifications for:

- lifts, ramps, and wheelchair securement devices based on existing requirements for other buses in 36 CFR 1192.23 and 49 CFR 38.23;
- accessible restrooms based on existing requirements for commuter and

<sup>2</sup> OTRBs purchased by public entities or by a contractor to a public entity must currently meet the same accessibility requirements as do other buses, including requirements for lifts or ramps and wheelchair securement devices. 49 CFR 37.7(c).

intercity rail cars in 36 CFR 1192.107 and 1192.123, and 49 CFR 38.107 and 38.123; and

- front door width, overhead clearance for doors with lifts or ramps, and step riser height and tread depth.

On March 25, 1998, the Access Board and the DOT issued a joint notice of proposed rulemaking (NPRM) to amend the accessibility guidelines and standards for OTRBs, as discussed at the workshop. (63 FR 14571). The NPRM also proposed to revise the exterior lighting specification for OTRBs and other buses based on an equivalent facilitation determination made by the DOT.

The DOT published a separate NPRM in the same **Federal Register** which addressed when OTRB operators would be required to comply with those specifications. (63 FR 14560).

#### Section-by-Section Analysis

A total of 14 comments were received by the Board in response to the NPRM. One comment dealt only with issues raised by the Department of Transportation's NPRM and did not address any items under consideration by the Board. A comment submitted by a public transit operator wanted changes in the number of wheelchair or mobility aid seating locations for a 96-inch wide bus. However, public operators are subject to section \_\_.23, which was not the subject of this rulemaking. A manufacturer of urban transit buses was concerned that some of the provisions would apply to such buses and wanted a change in the definition of an OTRB. A manufacturer of OTRBs also suggested a change in the definition because it claimed the current definition would not include a 45-foot OTRB. In fact, the definition at 49 CFR 37.3 does not reference any length.<sup>3</sup> Since the definition of an OTRB is statutory, the Board has not changed it. Also, since accessible restrooms will not be required, the proposed specifications have been moved to a new appendix section as advisory guidance. Figure 1 has been revised to conform to the text of the regulation.

#### Section \_\_.31 Lighting

This section requires that lighting be provided outside the bus door to illuminate the ground beyond the steps and lift. This section refers to urban transit buses but is being amended in

<sup>3</sup> The definition in the Department of Transportation regulation states "Over-the-road bus means a bus characterized by an elevated passenger deck over a baggage compartment." The definition of "Bus" includes some examples which in no way limit the scope of the definition. 49 CFR 37.3.

this rulemaking to be consistent with section \_\_\_\_\_.157, below.

#### Section \_\_\_\_\_.153 Doors, Steps and Thresholds

Paragraph (a) currently requires slip-resistant surfaces and no changes were proposed.

Paragraph (b) currently requires step edge contrast and proposed to add requirements for step riser height and tread depth.

*Comment.* Commenters representing the interests of people with disabilities generally supported the requirements for step risers and treads, citing the benefits to some persons with mobility limitations but who would not want to use the lift. Manufacturers said that there was limited space in the vestibule and that decreasing the riser height and increasing the tread depth would require raising the first step, increasing the intrusion of steps into the aisle, interfering with structural components or steering mechanisms, decreasing baggage space, or some combination.

*Response.* As the NPRM explained, this proposal was similar to the proposal for urban transit buses in 1991, which was not adopted. At that time, the Board was convinced that the requirements were not practicable. However, as the NPRM pointed out, there have been some significant changes in urban transit bus design in the intervening years and the Board asked whether there had been similar changes in OTRB design that would make the provisions feasible. The documentation supplied has convinced the Board that changes which have occurred have not been such that meeting the proposed requirements is now feasible. Therefore, the proposed requirements relating to riser height and tread depth have not been included in the final rule and the provision will remain unchanged from its current specification.

Paragraph (c) specifies a minimum clear width for doors (other than doors in which lifts are installed; the width of such doors are governed by the lift width requirement) but would allow tapering above 48 inches. This paragraph also proposed to allow minimal protrusion into this clear opening by hinges or operating mechanisms, provided such protrusions were between specified heights.

*Comment.* Manufacturers said that some buses could achieve a 30-inch front door opening while others could only achieve a 27-inch opening, which is the current requirement. They pointed out that the width was a function of approach angle, front axle location (which could affect axle weight

loading), and bus length. They also said that the rule should not prescribe hinge location, as this could restrict design options.

*Response.* Achieving the widest possible door is desirable because some individuals with mobility limitations need to swing their legs to the side to mount steps. This typically occurs when entering or exiting the door itself, since once through the door, persons who use crutches or walkers usually hold the stepwell handrails rather than using their mobility aids while climbing the steps. While lifts are required to accommodate standees, the height of an OTRB floor may make the use of the lift problematic for some persons. Therefore, the front door should be as usable as possible. On the other hand, the Board recognizes that there are technical difficulties in providing wider front doors in all cases. Therefore, the final rule has been modified from the proposal to specify a 30-inch door whenever possible, but has included an exception where this is not feasible. An appendix note has been added to indicate the factors which would indicate what constitutes infeasibility. Also, the references to hinge height have been removed.

Paragraph (d) has been added to specify a minimum lift door height. The NPRM specified a minimum height of 68 inches, measured from the highest point of the lift to the door header.

*Comment.* Disability organizations supported this provision as needed to accommodate standees who would be unable to use the front door steps. Manufacturers said that the door height should be measured from the door sill rather than the highest point of the lift platform, as proposed. They pointed out that the platform would vary in height depending on load. For example, when unloaded, the platform is designed to be higher than the sill so that a wheelchair user exiting the bus would be going slightly up, increasing the feeling of security. Even a slight "drop" at the sill might be unsettling, they said.

Also, there are different models of OTRBs with characteristics designed to meet specific needs. The largest buses, used primarily for sightseeing tours, could almost meet the requirement. However, there are other models designed to operate where overhead clearance is restricted by bridges, tunnels or other facilities. These vehicles must have a lower roof height and, therefore, could not achieve the proposed door height. Still other models are designed primarily for "line haul" transportation. These vehicles have a roof height nearly as high as the largest bus but a slightly higher floor to

decrease the interior volume and increase luggage space. This reduces the space which must be air conditioned and, thus, improves fuel efficiency.

*Response.* The final rule specifies that the measurement is to be taken from the door sill and specifies a 65-inch minimum. All dimensions are subject to the dimensional tolerances allowed by section \_\_\_\_\_.4(b), consistent with significant figures and rounding conventions.

#### Section \_\_\_\_\_.157 Lighting

This section requires that lighting be provided outside the bus door to illuminate the ground beyond the steps and lift.

*Comment.* A manufacturer pointed out that the typical sedan door on an OTRB would block part of the light so that the proposed requirement to illuminate the area for three feet from "all points" perpendicular to the step would not be practicable.

*Response.* The phrase "all points" has been removed from the final provision, both here and in section \_\_\_\_\_.31. A clarification has also been added since the provision applies to doorways in which lifts or ramps are installed. The provision was originally written to apply to urban transit buses in which the lift or ramp is normally installed in a door which also includes steps. Since the lift on an OTRB is installed in a separate door, the proposed reference to illumination perpendicular to the step tread has no meaning. Therefore, the provision has been clarified to apply the illumination requirement to the lift as well.

#### Section \_\_\_\_\_.159 Mobility Aid Accessibility

This section provides the technical requirements for lifts, ramps and securement systems.

Paragraph (a) provides the general scoping for the requirements of the following paragraphs. It specifies the number of securement locations to be provided and requires sufficient clearances to allow a wheelchair or mobility aid user to reach a securement location. Also, an exception allows a station-based lift that meets the same requirements as would apply to a lift mounted on the vehicle.

*Comment.* An individual with a disability said that the maneuvering clearance required should be spelled out since his experience with his city's buses was that there is insufficient room to maneuver past the driver position.

*Response.* Unlike urban transit buses, lifts on OTRBs are not installed in the front door. A separate door is provided in the side of the bus so a lift user does

not need to negotiate the aisle beside the driver. Therefore, the proposed provision is deemed adequate and no change has been made for the final rule.

*Comment.* A commenter objected to the inclusion of the exception allowing a station-based lift on safety grounds because no lift would be present on the bus if it stopped at a location other than the station.

*Response.* This exception is expected to be of limited use. It would only apply to the case in which an OTRB traveled solely between specific stations where the station-based lifts were deployed. This might occur, for example, where a bus provides a scenic trip through a park area and only picks up and discharges passengers at a visitors' center, scenic overlook, restaurant or similar locations, but does not operate outside the park. The Board expects this situation to be rare but the option of a station-based lift may provide some cost saving and is, therefore, worth preserving. The exception has been retained in the final rule.

Paragraph (b) provides the technical specifications for lifts.

*Comment.* A commenter suggested that the outer barrier should be five inches high.

*Response.* No rationale was provided for the recommendation. The proposal contains a performance requirement that a common wheelchair or mobility aid be prevented from rolling off the lift platform whenever the platform is three inches or more off the ground. The performance requirement is sufficient and no change has been made in the final rule.

*Comment.* One commenter said the lift platform should be prohibited from blocking the window at the securement location.

*Response.* Such a requirement might preclude the use of some lifts. Since the NPRM did not propose this requirement, there was no opportunity for comment. Therefore, the final rule does not include such a requirement. An appendix note has been added to alert designers to this concern.

Paragraph (c) provides technical requirements for ramps.

No comments were received on this paragraph and no changes have been made.

Paragraph (d) provides technical requirements for wheelchair and mobility aid securement.

*Comment.* Two comments expressed concerns about the safety of the proposed securement requirements for OTRBs which travel at highway speeds. One of these suggested that the Department of Transportation not adopt any requirements for transporting

wheelchairs on OTRBs until a comprehensive study is conducted.

In connection with this section, the NPRM asked whether seats in OTRBs were required to meet safety standards different from those of urban transit buses. One manufacturer responded saying the requirements were the same.

*Response.* Neither of the comments which expressed safety concerns provided any data to substantiate such a concern. Accessible OTRBs have been in service in the United States and around the world for many years. The Board is not aware of any problems with the securement systems.

Actually, it is not the speed of the vehicle which is critical but the deceleration experienced when the vehicle stops suddenly. The heavier the vehicle, the slower it will come to a stop and, thus, the lower the deceleration. For this reason, the securement requirements for vans and small buses are higher than for large urban transit buses. OTRBs are heavier still. In fact, no securement of any kind is required for trains and rail vehicles, which may reach speeds as high as 150 miles per hour.

The securement requirement for urban transit buses was derived from the requirements for seats in general. That is, the force requirements were designed to restrain a wheelchair or mobility aid to the same extent as the general passenger seats are required to be anchored to the bus by motor vehicle safety standards. Since the seats in OTRBs are subject to the same requirements as urban transit buses, there does not appear to be any reason to apply a different standard to securement systems in such vehicles. Consequently, the provision has not been changed and the Board sees no evidence to suggest that the requirement should be deferred.

#### *Section \_\_\_\_ .161 Moveable Aisle Armrests*

This section requires that at least 50% of aisle armrests be moveable to allow persons with mobility limitations to enter and exit the seats easier.

*Comment.* The NPRM asked whether moveable aisle armrests should be required to be provided and, if so, where and how many. Disability organizations supported a requirement and wanted all aisle armrests to be moveable. One organization said that it preferred all but no less than 50%, similar to the regulations under the Air Carrier Access Act regulations. A manufacturer said that it provided all aisle seats with moveable armrests as a standard feature.

*Response.* The Board has decided to require that a minimum of 50% of the aisle seats, including all those removable or moveable seats at securement locations have moveable armrests.

#### **Regulatory Process Matters**

This final rule is jointly issued by the Access Board and the DOT to amend the accessibility guidelines and standards for OTRBs by adding technical specifications for lifts, ramps, wheelchair securement devices, and movable aisle armrests. The final rule also revises technical specifications for doors and lighting. DOT has published a separate final rule in today's **Federal Register** which addresses when OTRB operators are required to comply with the technical specifications. The final rules are closely related and the Access Board and the DOT have treated them as a single regulatory action for purposes of Executive Order 12866 and the Regulatory Flexibility Act in order to avoid duplicative or unnecessary analyses. The final rules are a significant regulatory action under Executive Order 12866 and DOT's Regulatory Policies and Procedures. DOT has prepared a Regulatory Impact Analysis (RIA), which is summarized in the separate final rule the DOT has published in today's **Federal Register**. The Office of Management and Budget has reviewed both final rules.

The final rules are likely to have a significant impact on a substantial number of small entities. DOT has incorporated a Regulatory Flexibility Analysis into the RIA and has included provisions in the separate final rule published in today's **Federal Register** to reduce the burden on small OTRB operators.

#### **Text of Final Common Rule**

The text of the final common rule amendments to 36 CFR part 1192 and 49 CFR part 38 appear below.

1. Section \_\_\_\_ .31 is amended by revising paragraph (c) to read as follows:

#### **§ \_\_\_\_ .31 Lighting.**

\* \* \* \* \*

(c) The vehicle doorways, including doorways in which lifts or ramps are installed, shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance 3 feet (915 mm) perpendicular to the bottom step tread or lift outer edge. Such light(s) shall be shielded to protect the eyes of entering and exiting passengers.

2. Section \_\_\_\_ .153 is amended by revising paragraph (c) and by adding paragraph (d) to read as follows:

**§ \_\_\_\_ .153 Doors, steps and thresholds.**

\* \* \* \* \*

(c)(1) Doors shall have a minimum clear width when open of 30 inches (760 mm), measured from the lowest step to a height of at least 48 inches (1220 mm), from which point they may taper to a minimum width of 18 inches (457 mm). The clear width may be reduced by a maximum of 4 inches (100 mm) by protrusions of hinges or other operating mechanisms.

(2) *Exception.* Where compliance with the door width requirement of paragraph (c)(1) of this section is not feasible, the minimum door width shall be 27 in (685 mm).

(d) The overhead clearance between the top of the lift door opening and the sill shall be the maximum practicable but not less than 65 inches (1651 mm).

3. Section \_\_\_\_ .157 is amended by revising paragraph (b) to read as follows:

**§ \_\_\_\_ .157 Lighting.**

\* \* \* \* \*

(b) The vehicle doorway shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the pathway to the door for a distance of 3 feet (915 mm) to the bottom step tread or lift outer edge. Such light(s) shall be shielded to protect the eyes of entering and exiting passengers.

4. Section \_\_\_\_ .159 is revised to read as follows:

**§ \_\_\_\_ .159 Mobility aid accessibility.**

(a)(1) *General.* All vehicles covered by this subpart shall provide a level-change mechanism or boarding device (e.g., lift or ramp) complying with paragraph (b) or (c) of this section and sufficient clearances to permit a wheelchair or other mobility aid user to reach a securement location. At least two securement locations and devices, complying with paragraph (d) of this section, shall be provided.

(2) *Exception.* If portable or station-based lifts, ramps or bridge plates meeting the applicable requirements of this section are provided at stations or other stops required to be accessible under regulations issued by the Department of Transportation, the bus is not required to be equipped with a vehicle-borne device.

(b) *Vehicle lift—(1) Design load.* The design load of the lift shall be at least 600 pounds (2665 N). Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame and

attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls—(i) Requirements.* The controls shall be interlocked with the vehicle brakes, transmission, or door, or shall provide other appropriate mechanisms or systems, to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all levels (i.e., ground, curb, and intermediate positions) normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a momentary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception.* Where the lift is designed to deploy with its long dimension parallel to the vehicle axis and which pivots into or out of the vehicle while occupied (i.e., "rotary lift"), the requirements of this paragraph (b)(2) prohibiting the lift from being stowed while occupied shall not apply if the stowed position is within the passenger compartment and the lift is intended to be stowed while occupied.

(3) *Emergency operation.* The lift shall incorporate an emergency method of deploying, lowering to ground level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a rotary lift and is intended to be stowed while occupied.

(4) *Power or equipment failure.* Platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second (305 mm/sec) or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers.* The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling

off the platform during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the vehicle until the platform is in its fully raised position. Each side of the lift platform which extends beyond the vehicle in its raised position shall have a barrier a minimum 1½ inches (13 mm) high. Such barriers shall not interfere with maneuvering into or out of the aisle. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier of the lift shall automatically raise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the platform is more than 3 inches (75 mm) above the roadway or sidewalk and the platform is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged, or disengaged by the lift operator, provided an interlock or inherent design feature prevents the lift from rising unless the barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface.* The platform surface shall be free of any protrusions of ¼ inch (6.5 mm) high and shall be slip resistant. The platform shall have a minimum clear width of 28½ inches (725 mm) at the platform, a minimum clear width of 30 inches (760 mm) measured from 2 inches (50 mm) above the platform surface to 30 inches (760 mm) above the platform, and a minimum clear length of 48 inches (1220 mm) measured from 2 inches (50 mm) above the surface of the platform to 30 inches (760 mm) above the surface of the platform. (See Figure 1 to this part.)

(7) *Platform gaps.* Any openings between the platform surface and the raised barriers shall not exceed ⅝ inch (16 mm) in width. When the platform is at vehicle floor height with the inner barrier (if applicable) down or retracted, gaps between the forward lift platform edge and the vehicle floor shall not exceed ½ inch (13 mm) horizontally and ⅝ inch (16 mm) vertically. Platforms on semi-automatic lifts may have a hand hold not exceeding 1½ inches (28 mm) by 4½ inches (113 mm) located between the edge barriers.

(8) *Platform entrance ramp.* The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8, measured on level ground, for a maximum rise of 3 inches (75 mm), and

the transition from roadway or sidewalk to ramp may be vertical without edge treatment up to ¼ inch (6.5 mm).

Thresholds between ¼ inch (6.5 mm) and ½ inch (13 mm) high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection.* The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of vehicle roll or pitch) in any direction between its unloaded position and its position when loaded with 600 pounds (2665 N) applied through a 26 inch (660 mm) by 26 inch test pallet at the centroid of the platform.

(10) *Platform movement.* No part of the platform shall move at a rate exceeding 6 inches/second (150 mm/sec) during lowering and lifting an occupant, and shall not exceed 12 inches/second (300 mm/sec) during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction.* The lift shall permit both inboard and outboard facing of wheelchair and mobility aid users.

(12) *Use by standees.* Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The platform may be marked to indicate a preferred standing position.

(13) *Handrails.* Platforms on lifts shall be equipped with handrails on two sides, which move in tandem with the lift, and which shall be graspable and provide support to standees throughout the entire lift operation. Handrails shall have a usable component at least 8 inches (200 mm) long with the lowest portion a minimum 30 inches (760 mm) above the platform and the highest portion a maximum 38 inches (965 mm) above the platform. The handrails shall be capable of withstanding a force of 100 pounds (445 N) concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches (32 mm) and 1½ inches (38 mm) or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ⅝ inch (3.5 mm). Handrails shall be placed to provide a minimum 1½ inches (38 mm) knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(c) *Vehicle ramp*—(1) *Design load.* Ramps 30 inches (760 mm) or longer

shall support a load of 600 pounds (2665 N), placed at the centroid of the ramp distributed over an area of 26 inches by 26 inches (660 mm by 660 mm), with a safety factor of at least 3 based on the ultimate strength of the material. Ramps shorter than 30 inches (760 mm) shall support a load of 300 pounds (1332 N).

(2) *Ramp surface.* The ramp surface shall be continuous and slip resistant; shall not have protrusions from the surface greater than ¼ inch (6.5 mm) high; shall have a clear width of 30 inches (760 mm); and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from roadway or sidewalk and the transition from vehicle floor to the ramp may be vertical without edge treatment up to ¼ inch (6.5 mm). Changes in level between ¼ inch (6.5 mm) and ½ inch (13 mm) shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp shall have barriers at least 2 inches (50 mm) high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps shall have the least slope practicable and shall not exceed 1:4 when deployed to ground level. If the height of the vehicle floor from which the ramp is deployed is 3 inches (75 mm) or less above a 6 inch (150 mm) curb, a maximum slope of 1:4 is permitted; if the height of the vehicle floor from which the ramp is deployed is 6 inches (150 mm) or less, but greater than 3 inches (75 mm), above a 6 inch (150 mm) curb, a maximum slope of 1:6 is permitted; if the height of the vehicle floor from which the ramp is deployed is 9 inches (225 mm) or less, but greater than 6 inches (150 mm), above a 6 inch curb, a maximum slope of 1:8 is permitted; if the height of the vehicle floor from which the ramp is deployed is greater than 9 inches (225 mm) above a 6 inch (150 mm) curb, a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment.* When in use for boarding or alighting, the ramp shall be firmly attached to the vehicle so that it is not subject to displacement when loading or unloading a heavy power mobility aid and that no gap between vehicle and ramp exceeds ⅝ inch (16 mm).

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps, including portable ramps stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to

passengers in the event of a sudden stop or maneuver.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the vehicle while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches (760 mm) above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds (445 N) concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches (32 mm) and 1½ inches (38 mm) or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ⅝ inch (3.5 mm). Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(d) *Securement devices*—(1) *Design load.* Securement systems, and their attachments to vehicles, shall restrain a force in the forward longitudinal direction of up to 2,000 pounds (8,880 N) per securement leg or clamping mechanism and a minimum of 4,000 pounds (17,760 N) for each mobility aid.

(2) *Location and size.* The securement system shall be placed as near to the accessible entrance as practicable and shall have a clear floor area of 30 inches (760 mm) by 48 inches (1220 mm). Such space shall adjoin, and may overlap, an access path. Not more than 6 inches (150 mm) of the required clear floor space may be accommodated for footrests under another seat, modesty panel, or other fixed element provided there is a minimum of 9 inches (230 mm) from the floor to the lowest part of the seat overhanging the space. Securement areas may have fold-down seats to accommodate other passengers when a wheelchair or mobility aid is not occupying the area, provided the seats, when folded up, do not obstruct the clear floor space required. (See Figure 2 to this part.)

(3) *Mobility aids accommodated.* The securement system shall secure common wheelchairs and mobility aids and shall either be automatic or easily attached by a person familiar with the system and mobility aid and having average dexterity.

(4) *Orientation.* At least one securement device or system required by paragraph (a) of this section shall secure the wheelchair or mobility aid facing toward the front of the vehicle. Additional securement devices or systems shall secure the wheelchair or mobility aid facing forward or rearward. Where the wheelchair or mobility aid is

secured facing the rear of the vehicle, a padded barrier shall be provided. The padded barrier shall extend from a height of 38 inches (965 mm) from the vehicle floor to a height of 56 inches (1420 mm) from the vehicle floor with a width of 18 inches (455 mm), laterally centered immediately in back of the seated individual. Such barriers need not be solid provided equivalent protection is afforded.

(5) *Movement.* When the wheelchair or mobility aid is secured in accordance with manufacturer's instructions, the securement system shall limit the movement of an occupied wheelchair or mobility aid to no more than 2 inches (50 mm) in any direction under normal vehicle operating conditions.

(6) *Stowage.* When not being used for securement, or when the securement

area can be used by standees, the securement system shall not interfere with passenger movement, shall not present any hazardous condition, shall be reasonably protected from vandalism, and shall be readily accessed when needed for use.

(7) *Seat belt and shoulder harness.* For each wheelchair or mobility aid securement device provided, a passenger seat belt and shoulder harness, complying with all applicable provisions of the Federal Motor Vehicle Safety Standards (49 CFR part 571), shall also be provided for use by wheelchair or mobility aid users. Such seat belts and shoulder harnesses shall not be used in lieu of a device which secures the wheelchair or mobility aid itself.

5. Section \_\_\_\_ .161 is added to subpart G to read as follows:

**§ \_\_\_\_ .161 Moveable aisle armrests.**

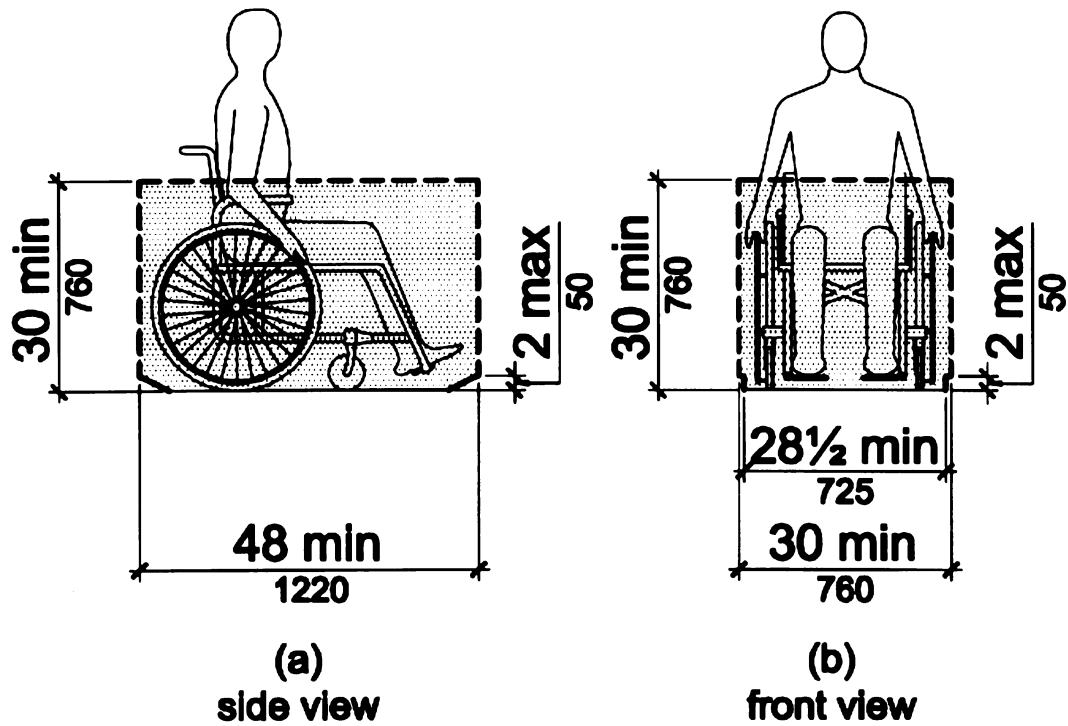
A minimum of 50% of aisle seats, including all moveable or removable seats at wheelchair or mobility aid securement locations, shall have an armrest on the aisle side which can be raised, removed, or retracted to permit easy entry or exit.

6. A heading is added at the end of part \_\_\_\_ preceding the figures to read as follows:

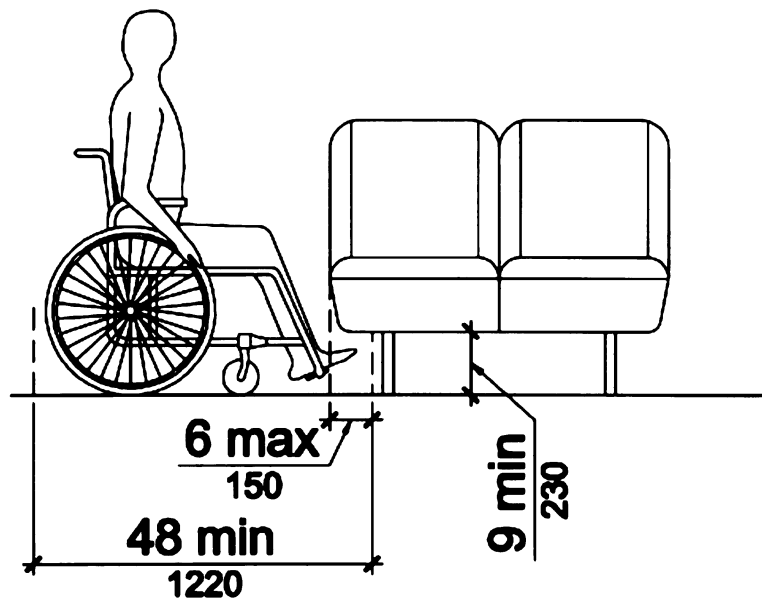
**Figures to Part \_\_\_\_**

7. Figures 1 and 2 are revised to read as follows:

BILLING CODE 4910-62-P



**Figure 1**  
**Wheelchair or Mobility Aid Envelope**



**Figure 2**  
**Toe Clearance Under a Fixed Element**



8. Appendix to Part \_\_\_\_ is amended by adding a new section VI to read as follows:

**Appendix to Part \_\_\_\_**

\* \* \* \* \*

*VI. Over-the-Road Buses*

*A. Door Width*

Achieving a 30 inch wide front door on an over-the-road bus is considered not feasible if doing so would necessitate reduction of the bus approach angle, relocating the front axle rearward, or increasing the bus overall length.

*B. Restrooms*

The following is provided to assist manufacturers and designers to create restrooms which can be used by people with disabilities. These specifications are derived from requirements for rail vehicles and represent compromises between space needed for use and constraints imposed by vehicle dimensions. As a result, some persons with disabilities cannot use a restroom which meets these specifications and operators who do provide such restrooms should provide passengers with disabilities sufficient advance information about design so that those passengers can assess their ability to use them. Designers should provide additional space beyond these minimum specifications whenever possible.

(1) If an accessible restroom is provided, it should be designed so as to allow a person using a wheelchair or mobility aid to enter and use such restroom as specified in paragraphs (1)(a) through (e) of section VI.B of this appendix.

(a) The minimum clear floor area should be 35 inches (890 mm) by 60 inches (1525 mm). Permanently installed fixtures may overlap this area a maximum of 6 inches (150 mm), if the lowest portion of the fixture is a minimum of 9 inches (230 mm) above the floor, and may overlap a maximum of 19 inches (485 mm), if the lowest portion of the fixture is a minimum of 29 inches (740 mm) above the floor, provided such fixtures do not interfere with access to the water closet. Fold-down or retractable seats or shelves may overlap the clear floor space at a lower height provided they can be easily folded up or moved out of the way.

(b) The height of the water closet should be 17 inches (430 mm) to 19 inches (485 mm) measured to the top of the toilet seat. Seats should not be sprung to return to a lifted position.

(c) A grab bar at least 24 inches (610 mm) long should be mounted behind the water closet, and a horizontal grab bar at least 40 inches (1015 mm) long should be mounted on at least one side wall, with one end not more than 12 inches (305 mm) from the back wall, at a height between 33 inches (840 mm) and 36 inches (915 mm) above the floor.

(d) Faucets and flush controls should be operable with one hand and should not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls should be no greater than 5 lbs (22.2 N). Controls for flush valves should be

mounted no more than 44 inches (1120 mm) above the floor.

(e) Doorways on the end of the enclosure, opposite the water closet, should have a minimum clear opening width of 32 inches (815 mm). Door latches and hardware should be operable with one hand and should not require tight grasping, pinching, or twisting of the wrist.

(2) Accessible restrooms should be in close proximity to at least one seating location for persons using mobility aids and should be connected to such a space by an unobstructed path having a minimum width of 32 inches (815 mm).

*C. Visibility Through a Window*

Care should be taken so that the lift does not obscure the vision of the person occupying the securement position.

**Adoption of Final Common Rule**

The agency specific proposals to adopt the final common rule, which appears at the end of the common preamble, are set forth below.

**Architectural and Transportation Barriers Compliance Board**

**36 CFR Part 1192**

**List of Subjects in 36 CFR Part 1192**

Buses, Civil rights, Individuals with disabilities, Mass transportation, Railroads, Transportation.

**Authority and Issuance**

For the reasons set forth in the common preamble, part 1192 of title 36 of the Code of Federal Regulations is amended as follows:

**PART 1192—AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR TRANSPORTATION VEHICLES**

1. The authority citation for 36 CFR part 1192 is revised to read as follows:

**Authority:** 42 U.S.C. 12204.

**§ 1192.31 [Amended]**

2. Section 1192.31 is amended by revising paragraph (c) to read as set forth at the end of the common preamble.

**§ 1192.153 [Amended]**

3. Section 1192.153 is amended by revising paragraph (c) and by adding paragraph (d) to read as set forth at the end of the common preamble.

**§ 1192.157 [Amended]**

4. Section 1192.157 is amended by revising paragraph (b) to read as set forth at the end of the common preamble.

**§ 1192.159 [Revised]**

5. Section 1192.159 is revised to read as set forth at the end of the common preamble.

**§ 1192.161 [Added]**

6. Section 1192.161 is added to subpart G to read as set forth at the end of the common preamble.

**PART 1192 [AMENDED]**

7. A heading is added at the end of part 1192 preceding the figures to read as set forth at the end of the common preamble.

8. Figures 1 and 2 are revised to read as set forth at the end of the common preamble.

**Appendix to Part 1192 [Amended]**

9. The appendix to Part 1192 is amended by adding section VI to read as set forth at the end of the common preamble.

Authorized by vote of the Access Board on July 15 and September 9, 1998.

**Thurman M. Davis, Sr.,**  
*Chair, Architectural and Transportation Barriers Compliance Board.*

**DEPARTMENT OF TRANSPORTATION**

**Office of the Secretary**

**49 CFR Part 38**

**List of Subjects in 49 CFR Part 38**

Buses, Civil rights, Individuals with disabilities, Mass transportation, Railroads, Transportation.

**Authority and Issuance**

For the reasons set forth in the common preamble, part 38 of title 49 of the Code of Federal Regulations is amended as follows:

**PART 38—AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY SPECIFICATIONS FOR TRANSPORTATION VEHICLES**

1. The authority citation for 49 CFR part 38 is revised to read as follows:

**Authority:** 42 U.S.C. 12101–12213; 49 U.S.C. 322.

**§ 38.31 [Amended]**

2. Section 38.31 is amended by revising paragraph (c) to read as set forth at the end of the common preamble.

**§ 38.153 [Amended]**

3. Section 38.153 is amended by revising paragraph (c) and by adding paragraph (d) to read as set forth at the end of the common preamble.

**§ 38.157 [Amended]**

4. Section 38.157 is amended by revising paragraph (b) to read as set forth at the end of the common preamble.

**§ 38.159 [Revised]**

5. Section 38.159 is revised to read as set forth at the end of the common preamble.

**§ 38.161 [Added]**

6. Section 38.161 is added to subpart G to read as set forth at the end of the common preamble.

**PART 38 [AMENDED]**

7. The existing heading preceding the figures is removed and a new heading is added at the end of part 38 preceding the figures to read as set forth at the end of the common preamble.

8. Figures 1 and 2 are revised to read as set forth at the end of the common preamble.

9. The appendix to Part 38 is amended by adding section VI to read as set forth at the end of the common preamble.

Dated: September 17, 1998.

**Rodney E. Slater,**

*Secretary of Transportation.*

[FR Doc. 98-25420 Filed 9-24-98; 2:15 pm]

BILLING CODE 8150-01-P, 4910-62-P